CHARACTERISTICS OF THE HYDICE SENSOR

R.W. Basedow and E. Zalewski
Hughes Danbury Optical Systems

Abstract

In 1992, in an effort to significantly improve knowledge in the field of hyperspectral imagery, the Naval Research Laboratories defined a set of requirements for a new generation sensor. Construction of this instrument, designated HYDICE, has recently been completed at Hughes Danbury Optical Systems. It is currently being flight tested on a Convair 580 operated by ERIM. This paper reports on some of the performance parameters measured to date. The majority of these are derived from laboratory test data. Optomechanical parameters include MTF, spatial co-registration, 'smile', spectral profile and spectral calibration. Detector-related parameters include system responsivity, signal to noise ratio, radiometric stability and gain linearity. The results are compared with the original system performance predictions.